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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/595,094	02/09/2006	Toshio Shimada	2005_2080A	2480

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EXAMINER	
LOVELL, LEAH S	

ART UNIT	PAPER NUMBER
2885	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/595,094	SHIMADA, TOSHIO	
	Examiner	Art Unit	
	Leah S. Lovell	2885	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 February 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 February 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *9 February 2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for priority under 35 U.S.C. 119(a)-(d) based upon an application filed in Japan on 10 December 2003, 13 February 2004, and 22 March 2004. A claim for priority under 35 U.S.C. 119(a)-(d) cannot be based on said application, since the United States application was filed more than twelve months thereafter.

Specification

2. The spacing of the lines of the specification is such as to make reading difficult. New application papers with lines 1½ or double spaced on good quality paper are required.

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Objections

4. The claims are objected to because the lines are crowded too closely together, making reading difficult. Substitute claims with lines one and one-half or double spaced on good quality paper are required. See 37 CFR 1.52(b).

5. Claims 1, 4 and 6 are objected to because of the following informalities:

- In claims 1, 4 and 6, a colon ":" should be inserted after comprising.
- In claim 4, it is suggested that either "forwards" be replaced by "forward" or, preferably, "as one goes forwards" be replaced with "as distance from the light emitting element increases"

- On line 1 of claim 6, "light-emitting device" should be replaced with "light-emitting element" for consistency with the rest of the claim.
- In claim 6, it is unclear what is meant by "formed by charging" (line 6 of the claim). It is suggested that this phrase be changed to clearly represent what is meant by the limitation.

6. Appropriate correction is required.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1, 2, 4 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Medvedev et al. (US 5,757,557).

Regarding claim 1, Medvedev discloses an indicator lamp comprising a light-emitting element [20] and a light-emitting element lens [10], wherein said light-emitting element lens [10] is constituted by a lens body [10] formed at the bottom thereof with a light-emitting element mounting cavity [14], said light-emitting device [20] being mounted therein [figure 1], said lens body [10] having an inverted conical shape peripheral surface [13, figure 1] for fully reflecting and forwardly re-directing light emitted from said light-emitting device [figure 1; column 2, lines 33-34], said peripheral surface having varying angles with respect to the axis of said lens from the bottom toward the front of said lens [figure 1], thereby forming one or more circumferential corners [each

change in slope constitutes a "circumferential corner" and since it is a parabolic shape there will be more than one changes in slope equating to more than one circumferential corners], which scatter light emitted from said light-emitting element forwardly to provide concentric emission light fluxes as viewed from the side of said lens front [figure 1].

In regard to claim 2, Medvedev discloses the indicator lamp according to claim 1, wherein said lens body [10] has a convex lens [12] part projecting from the center of said lens front [figure 1].

In regard to claim 4, Medvedev discloses an indicator lamp comprising a light-emitting element [20] and a lens body [10] with the diameter thereof increasing as one goes forwards [figure 1], said light-emitting element [20] being disposed at the bottom of said lens body [figure 1] and emitting light to be fully reflected by the peripheral surface [13] of said lens body and proceed forwardly thereof [figure 1; column 2, lines 33-34], said lens body [12] being formed at the bottom thereof with a substantially cylindrical cavity [14] accommodating said light-emitting element [20] [figure 1], light emitted from said light-emitting element such as to be directed toward the peripheral surface of said cavity being incident on said lens body at angles less than the full reflection angle corresponding to the refractive index of said lens body [figure 1], passing through said lens body [figure 1], and being incident on the peripheral surface of said lens body to be fully reflected and proceed forwardly of said lens body [figure 1], light emitted from said light-emitting device such as to be directed toward the front surface of said cavity being incident on said lens body at angles less than said full reflection angle and passing

through said lens body to directly proceed forwardly of said lens body [figure 1; ray 32, 33, 31].

In regard to claim 5, Medvedev discloses the indicator lamp according to claim 4, wherein the front [11, 12] of said lens body [10] has a convex lens [12] part projecting forwardly of said lens body [figure 1] and also a flat surface [11] part extending around said convex lens part [figure 1], light emitted from said light-emitting element such as to be directed toward the front surface of said cavity being incident on said lens body at angles less than the full reflection angle of said lens body [figure 1], passing through said lens body and being converged by said convex lens part to proceed forwardly of said lens body [figure 1], light emitted from said light-emitting device such as to be directed toward the peripheral surface of said cavity being incident on said lens body at angles less than the full reflection angle of said lens body to be fully reflected and proceed forwardly from said flat surface part [figure 1].

9. Claims 6 and 7 rejected under 35 U.S.C. 102(b) as being anticipated by Sorg (US 6,746,295).

Regarding claim 6, Sorg discloses an indicator lamp comprising a light-emitting device [2, 5] and a full reflection lens [4; column 3, lines 51-53] disposed atop said light-emitting element [figure 2], said light-emitting element [2] emitting light to be reflected by said full reflection lens and proceed forwardly of said full reflection lens [figure 2, based on shape of recess], a convex lens part [3] being disposed atop said light-emitting element [figure 2], said convex lens part [3] being formed by charging a transparent polymer material [it is inherent in the art that a resin is a polymer] into a frame [4, 1]

disposed such as to surround said light-emitting element from above said frame such as to be raised in a convex shape [figure 3].

In regard to claim 7, Sorg discloses the indicator lamp according to claim 6, wherein said frame [4] is made of a transparent material [lenses are transparent].

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Medvedev et al. (US 5,757,557) as applied to claim 1 above, and further in view of Isokawa (US 7,098,485).

Regarding claim 3, Medvedev teaches a light emitting device having a central convex region to direct some light emitted by the LED in a path parallel to the optical axis of the device while light emitted from the area spreads around this direct path. A person of ordinary skill in the art, upon reading the reference, would also have recognized the desirability of improving the directness of the beam for spot illumination. Isokawa teaches that additional semi-circular ridges around a central convex region would direct all light emitted by the light emitting diode in a path parallel to the optical axis of the device [figure 5]. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to try additional semicircular ridges of Isokawa in an attempt to improve the concentrations of the beam of the device of Medvedev, as a

person with ordinary skill has good reason to pursue the known options within his or her technical grasp. In turn, because light-emitting devices as claimed have the properties predicted by the prior art, it would have been obvious to make a light emitting device having a central convex region surrounded by semi-circular ridges. *KSR International Co. v. Teleflex Inc., 82 USPQ2d 1385 (2007).*

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- Latz et al. (US 5,043,716)
- Marshall et al. (US 6,547,423)
- Chinniah et al. (US 6,724,543)
- Suehiro et al. (US 7,111,964)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leah S. Lovell whose telephone number is (571) 272-2719. The examiner can normally be reached on Monday through Friday 7:45 a.m. until 4:15 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jong-Suk (James) Lee can be reached on (571) 272-7044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Leah Lovell
Examiner
25 September 2007

ALAN CARIASO
PRIMARY EXAMINER